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U S NAVY RESPONSE TO U S EPA REGION III COMMENTS TO DRAFT SAMPLING AND
ANALYSIS PLAN SITE 7 EXPANDED REMEDIAL INVESTIGATION NWS YORKTOWN VA
2/9/2012
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February 9, 2012

Mr. Moshood Oduwole
Federal Facility Remediation (3HS11)
USEPA Region 3
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

Subject: Response to Comments
Draft Sampling and Analysis Plan, Site 7 Expanded Remedial Investigation
NWS Yorktown
Yorktown, Virginia

Dear Mr. Oduwole,

This letter is in response to your comments on the subject document provided in your comment letter dated December 15, 2011. Responses also reflect the discussions during the January 5, 2012 teleconference. Comments are presented below followed by responses in italics.

1. Page 6: The executive summary notes in the first bullet that eight primary co-located surface and subsurface soil samples will be collected. This number of samples appears too limited. Figure 2 shows seven numbered buildings and three conveyer buildings. Building 375 appears to be more than one building. There is a single soil sample location associated with each of these buildings/conveyers. At a minimum, composite sampling should be considered at smaller buildings, and one sub-sample per 2,500 square feet at larger buildings at the site. In addition, it is not clear if all the soil/sediment within the study area boundary has been adequately sampled.

Response: Site 7 was identified in the FFA as the Plant 3 Explosives-Contaminated Wastewater Discharge Area. Previous studies have indicated a concern with media associated with Plant 3. The Navy's approach to the Plant 3 area was to identify potential releases beneath the former plant buildings, specifically Building 375, in accordance to previous Tier I partnering team agreements and EPA recommendations. However, in order to bring the Plant 3 investigation to a conclusion, the Navy is revising its approach to the soil and groundwater investigation.

To address the EPA's concern regarding the number of soil samples, the Navy will no longer collect primary and secondary samples and agrees to increase the number of soil sample locations in the UFP-SAP from 11 locations (including two upgradient) to 28 (including two upgradient), which will include both discrete surface and subsurface samples (resulting in an increase from a total of 22 soil samples to a total of 56 soil samples). The soil sample locations are provided on the attached Figure 1 and were developed through a review of building drawings, site topography, and storm water drainage maps. The rationale for each soil sample

location is provided in attached Table 1 and will be included in the draft final UFP-SAP, but are located in positions which will best determine locations of potential releases and contaminant accumulation. The collection of these discrete samples will also provide sufficient data to conduct screening risk assessments.

Six new monitoring wells (two upgradient and four downgradient) were proposed in the draft UFP-SAP. The Navy will add one new downgradient well to the investigation. As documented in the UFP-SAP, the proposed downgradient monitoring well locations are provided on Figure 2, but the final locations will be determined based on nature and extent of contamination detected within the soil samples.

In relation to the adequacy of the existing data set, Figure 3 of the UFP-SAP was provided identifying all previous sample locations. The UFP-SAP will be reviewed and additional text referencing previous investigative data and decisions will be incorporated, as appropriate. Please reference the administrative record for all previous data and decisions pertaining to the site.

2. Page 6: The executive summary notes in the second bullet that up to ten secondary surface and subsurface soil samples will be collected, as needed, depending upon the results of the primary sample analyses. As noted in the first comment, this additional sample number is also too limited. The need for secondary samples should not be contingent on an insufficient number of primary samples. Compartmentalizing the samples into primary and secondary samples needs to be adequately justified.

Response: Please see response to comment 1.

3. Page 6: The executive summary notes, in bullet 6, that up to five seep and pore water samples, as well as up to eight surface water and sediment samples, will be collected for analyses to be determined by the results of the soil and groundwater sampling. Collection of seep and pore water samples should be independent of the results of soil and groundwater samples. It is also recommended that seep and pore water samples be collected at the same time as groundwater samples. All seeps and pore water areas (outfall pipes included) need to be sampled when they are likely to be flowing and the number should not be arbitrarily restricted. It is not clear from the text or figures that up to eight surface water and sediment samples will be sufficient as these sample locations are not depicted in any of the figures.

Response: The Navy agrees that if pore water or seep samples are to be collected, they should be done at the same time as groundwater sampling. However, the Navy believes that in order to determine if a concern to these media exists, that both soil and groundwater should first be evaluated. If soil and groundwater results indicate a potential risk to receptors, then a scoping session for selection of sediment, surface water, pore water, and possible seep sample locations will be held. An additional round of groundwater samples would then be collected at the time of the pore water and seep sampling.

4. Page 6: The executive summary notes, in bullet 8, that an ERA will be performed "Based on the nature of any screening value exceedance...." This statement requires further clarification. The screen is part of the ecological risk assessment process.

Response: Ecological screening will be conducted on soil and groundwater to support decisions on the placement of, and analytes for, seep/pore water, surface water, and sediment samples. This will be clarified in the text. All analytical data collected at the site will be evaluated quantitatively in the ecological risk assessment, with the exception of the groundwater data, which will be evaluated qualitatively in support of the aquatic assessment.

5. Page 31: The sampling strategy included in the comments/decision portion is too limited to get an adequate understanding of what contamination is present on this site (see previous comments above).

Response: Please see the response to comment #1.

6. Page 32: From the data presented, it is not clear that the analytical parameters selected for analysis are appropriate. Again, a review of the previous data will help BTAG determine if the analyses selected are appropriate.

Response: The UFP-SAP was developed through review and discussions of previous data contained in documents listed in Worksheet #10. Text summarizing the results of the investigation is also provided in Worksheet #10, Problem Definition. Documents and data used in the evaluation are available through the Administrative Record.

7. Page 33: The text indicates that because the only one sample had PAHs prior to the Pilot Study and removal, PAHs do not have to be a COPC in the current sample analyses. Because this is a CERCLA site and areas being proposed for sampling now were not sampled before, all contaminants analyses need to be performed on these samples.

Response: A discussion on the technical justification and team concurrence to not sample for PAHs is included in the text on page 47 of the Draft UFP-SAP. This discussion outlines potential laboratory contaminant issues related to BEHP, the lack of PAHs detections present in subsequent sampling events, and the removal of the detected PAH location during the 1998 action. During the September 2010 scoping session with the Yorktown Tier 1 Partnering Team, based upon a review of all available data, consensus was reached that SVOCs were not a site related contaminant and would not be evaluated. No change to the document has been made and no additional analysis is proposed.

8. Page 35: The text refers to a structure 1904 on the site maps. This structure is not, and needs to be, identified on the figures in this report.

Response: The labeling for building 1904 will be added to Figure 2.

9. Page 39: The text indicates that the loading plant buildings have been demolished and the partnering team requested that the former footprint of the buildings be investigated. Based on the data presented in this report, it is not clear why only the former footprint of the buildings needed to be investigated, rather than the footprint and surrounding area.

Response: The original CERCLA source identified at Site 7 was the discharge to the downgradient wetland/Felgates Creek, not the buildings associated with Plant 3. The source for the site was investigated and remediated and a ROD was finalized in 1998. There is no documented release directly associated with the former buildings and they were not identified in either the IAS or the facility's FFA.

At the recommendation of the USEPA, the team scoped the additional sampling as presented in the Draft UFP-SAP as a conservative measure following the building demolition in 2009. Consistent with the CERCLA process, the team designed this investigation in a phased approach, planning to initially identify potential source releases and areas which may require further study. This includes the sampling of additional soils following an initial identification of potential sources and complete transport and exposure pathways. As outlined in the UFP-SAP, the placement of the samples in the later phases of the investigation were to be discussed and determined with the Partnering Team upon review of the initial sample results.

However, in order to bring this site to closure, the Navy agrees that areas outside the extent of the footprint will be investigated. The Navy believes the revised sampling approach proposed in the Response to Comment 1 will adequately characterize the site in order to move the site into an FS.

10. Page 41: The text states "...a Record of Decision (ROD) was signed in 1998 affirming that soil and sediment within the drainage area had been remediated to levels protective of future industrial land use...." The text also needs to affirm that soils and sediment within this drainage area were remediated to levels that are protective of ecological receptors and define what those levels are.

Response: The text of the UFP-SAP will be modified with language from the 1998 ROD which indicates that soils, surface water, and sediment within the drainage area no longer pose an ecological risk. The following statement will be included for clarification, "Additionally, the ROD states that upon completion of the Pilot Study removal action, which had already been conducted, no additional action was necessary for ecological receptors." For additional detail, reference the 1998 ROD.

11. Page 42: The text indicates that the area between and downgradient of buildings 502 and 503, as well as the area in the vicinity of buildings 504 and 505, would require additional evaluation. It is assumed that this additional evaluation will involve sampling/analyses for contaminants. What is not clear from this report is whether, or not, there are other areas within the study area boundary that will need additional evaluation. It is important that the previous sampling activities are adequately so the basis of the current sampling design can be understood.

Response: Please see the Response to Comment 1, the revised proposed sampling Figure 1 and Figure 2, and attached Table 1, which present the location and rationale for additional discrete soil samples and monitoring well stations across the Plant 3 environ (including Buildings 502, 503, 504, and 505). New soil and groundwater data will be evaluated from these areas and a determination made as to whether sediment, surface water, pore water or seep samples will be collected.

12. Page 45: The text indicates that historical data from the drainage will not be used in this report because it was previously remediated. Since the drainage way was remediated before soils/groundwater had been adequately evaluated, the potential for re-contamination exists. It is important to verify that the upgradient area of the drainage way was included in the previous remediation, if this is not the case (or cannot be verified) re-sampling the drainage area should be considered to verify that it has not been re-contaminated.

Response: New soil samples will be collected from a location at the most upgradient point of the removal area to determine if concentrations in soil pose a potential recontamination issue. The results (along with other nearby soil data) will be discussed with the regulators and a determination will be made as to whether sampling within other areas of the former removal area should be conducted.

13. Page 47: The text indicates that PAHs detected in one surface soil sample do not represent a hot spot. Justification for this statement needs to be included in this text.

Response: Please see the response to Comment #7.

14. Page 48: The project action limits that will be taken from literature based sources need to be identified.

Response: These values are listed in Worksheet #15 for each relevant medium. References for each ecological PAL will be added to the Worksheet #15 tables.

15. Page 71: This table has a column of EcoSSL values. The sources of these values needs to be identified and their use justified as EPA has not identified the number of EcoSSL values that are listed in this and other tables in this report.

Response: This typographical error will be corrected by replacing "Eco-SSL" with "Ecological Screening Value" in all relevant Worksheet #15 tables.

16. Figure 3 has an insert identifying an upstream sample location. It is not clear if this location was selected with consideration being given to the extent of tidal influence in Felgates Creek.

Response: Figure 3 depicts samples collected during previous Site 7 investigations, including surface water and sediment. The insert shows the location of an upstream (flood) station collected during the Round I (1993) and Round II (1998) investigations.

17. Page 6: It appears that soil samples will be collected at depths of up to 24 inches. If VOCs are observed in shallow subsurface soil, consideration should be given to collecting deeper samples in order to identify potential sources of groundwater contamination.

Response: As stated in the UFP-SAP, the Soil Screening Levels (SSLs) will be considered during soil screening. The Navy will confirm that the laboratory can achieve PALs supportive of comparison to SSL criteria for the methods currently outlined in the SAP. No additional subsurface soil samples (greater than 24-inches) are proposed at this time.

18. For VOCs in soil, in addition to direct contact RSLs, the potential for soil-to-groundwater migration should be considered during screening. This can be accomplished through the use of default soil-to-groundwater screening levels or site specific modeling.

Response: Please see the response to Comment #17.

19. Page 25: The "Education" column for the USEPA RPM should read "MS Environmental Geology", instead of "Masters Program Environmental Geology". Please update this column accordingly.

Response: This error will be corrected.

Please provide acceptance of these responses or additional comments by March 9, 2012. Please feel free to contact me should you have any additional questions.

Sincerely,

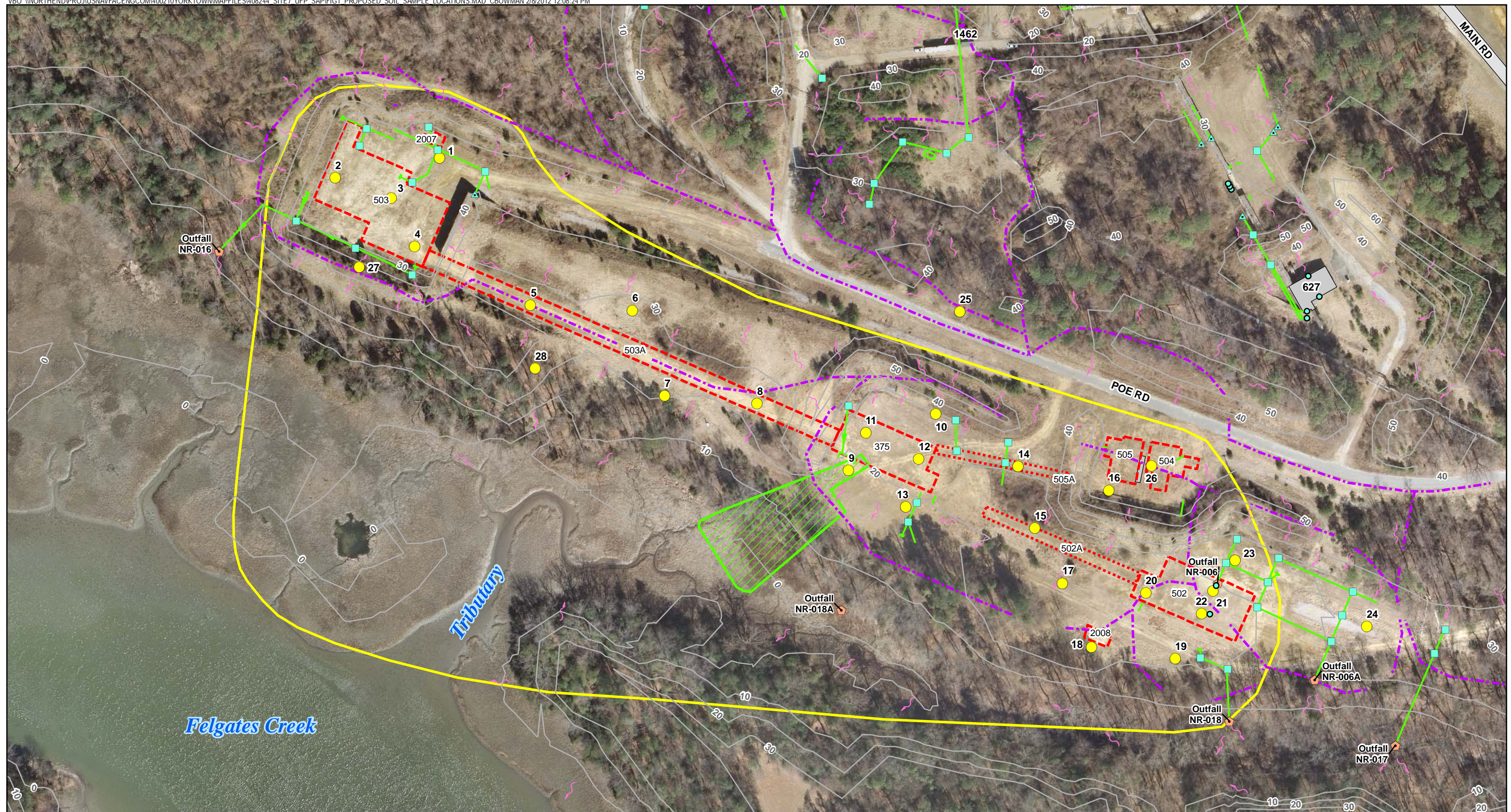
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A handwritten signature in cursive script that reads "William J. Friedmann Jr.".

William J. Friedmann, Jr.

Activity Manager

cc: Mr. Wade Smith/VDEQ
Mr. James Gravette/NAVFAC Midlant
Mr. Adam Forshey/CH2M HILL
Ms. Mary Anderson/CH2M HILL



Legend

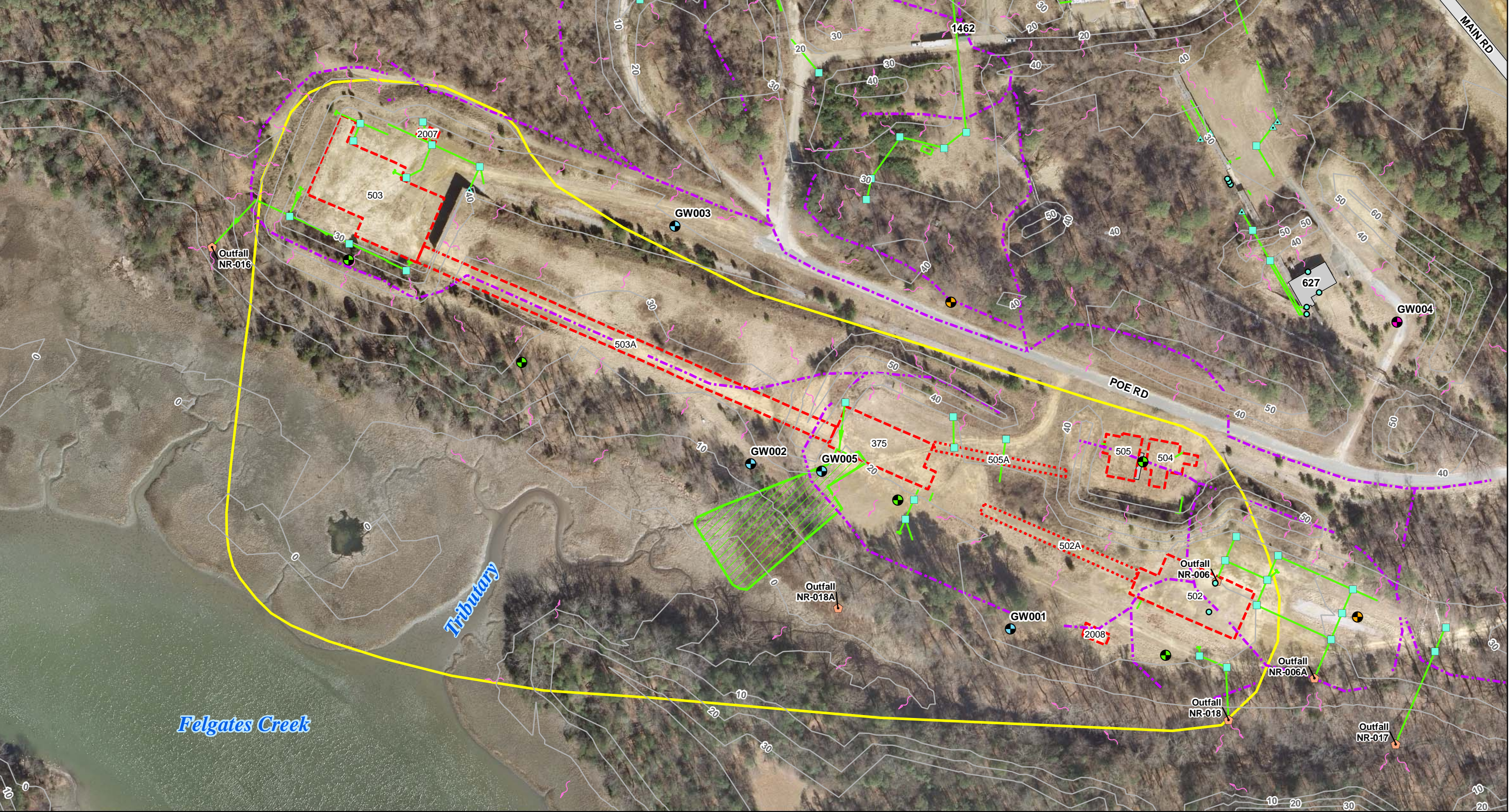
- Building Drain
- Culvert
- Drop Inlet
- Outfall
- Proposed Soil Sample Location
- Drainage Boundary
- Storm Sewer
- Elevation Contour (10 ft interval)
- Study Area
- Former Buildings
- Site 7 Removal Area (1996)
- Overland Flow



0 150 300
Feet

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Figure 1
Site 7 Proposed Soil Sample Locations
Naval Weapons Station Yorktown
Yorktown, Virginia



Legend

- Building Drain
- Culvert
- Drop Inlet
- Outfall
- Proposed Yorktown-Eastover Monitoring Well*
- Proposed Upgradient Yorktown-Eastover Well
- Existing Yorktown-Eastover Monitoring Well to be sampled
- Existing Yorktown-Eastover Monitoring Well will not be sampled

- Elevation Contour (10 ft interval)
- Drainage Boundary
- Storm Sewer
- Elevation Contour (10 ft interval)
- Study Area
- Former Buildings
- Site 7 Removal Area (1996)
- Overland Flow

Note:
* - Final Monitoring Well Locations will be determined based upon Soil Sample results.

Figure 2
Proposed Groundwater Monitoring Well Locations
Naval Weapons Station Yorktown
Yorktown, Virginia

0 150 300 Feet

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Sample Number	Rationale for Sample Location	Drainage Likely Associated with Sample
1	At bottom of roadway, between Building 2007 footprint and Building 503 footprint	Outfall NR-016
2	Within Building 503 footprint	Outfall NR-016
3	Within Building 503 footprint	Outfall NR-016
4	Within Building 503 footprint	Outfall NR-016
5	Within Building 503A (conveyor belt) footprint	Outfall NR-016
6	Upgradient of Building 503A (conveyor belt) footprint	Outfall NR-016
7	Downgradient of Building 503A (conveyor belt) footprint	Overland Flow to Felgates Creek
8	Within Building 503A (conveyor belt) footprint	Overland Flow to Felgates Creek
9	Downgradient of Building 375 within former removal area. Location of highest detections in groundwater	Overland Flow to Felgates Creek
10	Upgradient of Building 375	Outfall NR-018A
11	Within Building 375 Footprint	Outfall NR-018A
12	Within Building 375 Footprint	Outfall NR-018A
13	Downgradient of Building 375 Footprint	Outfall NR-018A
14	Within Building 505A (conveyor system) Footprint	Outfall NR-018A
15	Within Building 502A (conveyor system) Footprint and downgradient of Building 505A Conveyor	Outfall NR-018A
16	Downgradient of Buildings 504/505 Footprint	Outfall NR-018A
17	Downgradient Building 502A (conveyor system) Footprint	Overland Flow to Felgates Creek
18	Downgradient of Building 2008 Footprint	Overland Flow to Felgates Creek
19	Downgradient of Building 502 Footprint	Overland Flow to Felgates Creek
20	Within Building 502 Footprint	Outfall NR-018
21	Within Building 502 Footprint. Near floor drain	Outfall NR-018
22	Within Building 502 Footprint. Near floor drain	Outfall NR-018
23	Upgradient of Building 502 Footprint	Outfall NR-006
24	Upgradient Background Sample	Outfall NR-006
25	Upgradient Background Sample	Offsite toward Site 6
26	Within Building 504/505 Footprint	Outfall NR-018A
27	In topographic low between south side of Building 503 and berm	Outfall NR-016
28	Downgradient of Building 503A (conveyor belt) footprint	Overland Flow to Felgates Creek